

We Claim:

1. A honeycomb body, comprising:

a casing tube;

a honeycomb structure connected to said casing tube and defining an axial portion between said casing tube and said honeycomb structure;

an inner sleeve at least partially surrounding said honeycomb structure;

an outer sleeve at least partially surrounding said honeycomb structure;

said inner and outer sleeves being disposed in said axial portion; and

a plurality of joining locations adjacently interconnecting said honeycomb structure, said inner and outer sleeves and said casing tube to form an open spring/damper system from at least one of said sleeves.

2. The honeycomb body according to claim 1, wherein said honeycomb structure is connected to said casing tube by technical joining.

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3. The honeycomb body according to claim 1, wherein at least one of said sleeves has structures for compensation of changes in circumference of said honeycomb structure.

4. The honeycomb body according to claim 1, wherein said sleeves have structures for compensation of changes in circumference of said honeycomb structure, and said structures of said inner sleeve and said structures of said outer sleeve engage in one another and adjacent structures of said sleeves bear at least partially against one another.

5. The honeycomb body according to claim 3, wherein said structures are formed by corrugations in said sleeves, and adjacent joining locations of at least two of said structures are spaced apart from one another.

6. The honeycomb body according to claim 1, wherein said inner sleeve is connected to said honeycomb structure over an entire circumference of said honeycomb structure.

7. The honeycomb body according to claim 1, wherein said inner sleeve is brazed to said honeycomb structure over an entire circumference of said honeycomb structure.

8. The honeycomb body according to claim 1, wherein said plurality of joining locations include inner joining locations between said inner and outer sleeves and outer joining locations between said outer sleeve and said casing tube, being distributed uniformly over a circumference of said honeycomb structure, and directly adjacent inner and outer joining locations are mutually offset in circumferential direction.

9. The honeycomb body according to claim 1, wherein at least one of said inner and outer sleeves has a sleeve thickness smaller than 0.3 mm.

10. The honeycomb body according to claim 1, wherein at least one of said inner and outer sleeves has a sleeve thickness smaller than 0.2 mm.

11. The honeycomb body according to claim 8, wherein at least one of said inner and outer joining locations together have an extent in circumferential direction of less than 30% of a circumference of said honeycomb structure.

12. The honeycomb body according to claim 8, wherein at least one of said inner and outer joining locations together have an extent in circumferential direction of less than 20% of a circumference of said honeycomb structure.

13. The honeycomb body according to claim 8, wherein said inner and outer joining locations are mutually offset in axial direction of said honeycomb structure.

14. The honeycomb body according to claim 1, wherein said axial portion has a length of between 40% and 100% of an axial dimension of the honeycomb body.

15. The honeycomb body according to claim 1, wherein said honeycomb structure has sheet metal layers being at least partially structured to form channels through which an exhaust gas can flow.

16. The honeycomb body according to claim 15, wherein said honeycomb structure has a channel density of at least 800 cpsi, and said sheet metal layers have sheets with a sheet thickness smaller than 0.025 mm.

17. The honeycomb body according to claim 3, wherein at least one of said joining locations and said structures seal-off an annular gap between said casing tube and said honeycomb

structure for an exhaust gas flowing through the honeycomb body.

18. The honeycomb body according to claim 1, wherein at least one of said inner sleeve and said outer sleeve is one of at least two mutually axially spaced apart sleeves.

19. The honeycomb body according to claim 1, wherein at least one of said inner sleeve and said outer sleeve has at least one microstructure.

20. A catalyst carrier body, comprising:

a casing tube;

a honeycomb structure for carrying catalytic material for purifying an exhaust gas of an internal combustion engine, said honeycomb structure connected to said casing tube and defining an axial portion between said casing tube and said honeycomb structure;

an inner sleeve at least partially surrounding said honeycomb structure;

an outer sleeve at least partially surrounding said honeycomb structure;

said inner and outer sleeves being disposed in said axial portion; and

a plurality of joining locations adjacently interconnecting said honeycomb structure, said inner and outer sleeves and said casing tube to form an open spring/damper system from at least one of said sleeves.

21. A method for producing a honeycomb body, which comprises the following steps:

producing sleeve blanks;

forming inner joining locations between the sleeve blanks;

winding the sleeve blanks into at least one inner sleeve and at least one outer sleeve;

connecting ends of the sleeve blanks;

introducing the at least one inner sleeve and the at least one outer sleeve into a casing tube;

introducing a honeycomb structure into the inner sleeve; and

forming other joining locations interconnecting the honeycomb structure, the at least one inner sleeve, the at least one outer sleeve and the casing tube to form an open spring/damper system from at least one of the sleeves.

22. The method according to claim 21, which further comprises initially jointly calibrating at least two of the sleeve blanks before the step of forming the inner joining locations.

23. The method according to claim 21, which further comprises carrying out the step of forming the inner joining locations with a welding method.

24. The method according to claim 21, which further comprises carrying out the step of forming the inner joining locations with a welding method selected from the group consisting of rolled-seam welding and laser welding.

25. The method according to claim 21, which further comprises carrying out the step of connecting the ends of the sleeve blanks with a welding method.

26. The method according to claim 25, which further comprises selecting the welding method from the group consisting of rolled-seam welding and laser welding.

27. The method according to claim 21, which further comprises providing the at least one outer sleeve with brazing foil, before introducing the at least one outer sleeve into the casing tube, for the formation of outer joining locations.

28. The method according to claim 21, which further comprises providing the periphery of the honeycomb structure with a passivation, starting from one end face, through an offset, before the step of introducing the honeycomb structure into the inner sleeve.

29. The method according to claim 21, which further comprises subsequently bringing the joined-together honeycomb structure, casing tube, at least one inner sleeve and at least one outer sleeve into contact with at least one of an adhesive and a brazing powder, and then producing at least one of at least one tie-up and at least one outer joining location by thermal treatment.

30. The method according to claim 29, which further comprises carrying out the step of bringing the joined-together honeycomb structure, casing tube, at least one inner sleeve and at least one outer sleeve into contact, from one end face of the honeycomb structure.



31. The method according to claim 29, which further comprises carrying out the thermal treatment as a high-temperature vacuum brazing process.

32. A method for producing a catalyst carrier body, which comprises the following steps:

producing sleeve blanks;

forming inner joining locations between the sleeve blanks;

winding the sleeve blanks into at least one inner sleeve and at least one outer sleeve;

connecting ends of the sleeve blanks;

introducing the at least one inner sleeve and the at least one outer sleeve into a casing tube;

introducing a honeycomb structure, for carrying catalytic material for purifying an exhaust gas of an internal combustion engine, into the inner sleeve; and

forming other joining locations interconnecting the honeycomb structure, the at least one inner sleeve, the at least one

outer sleeve and the casing tube to form an open spring/damper system from at least one of the sleeves.